

## Technical Field

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## Background Art

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### Summary of the Invention

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Automatically establishing a customized electronic site may also include automatically establishing a database containing a selection of products and descriptions, and a database containing format preferences for the customized electronic site. Further, automatically establishing a customized electronic site  
5 may include replicating the first selection engine for use by the customized electronic site, or enabling the customized electronic site to access the first selection engine. Automatically establishing the customized electronic site may also include providing a second selection engine for use by the customized electronic site.

10       The network may be the Internet or the World Wide Web, and the customized electronic site may be a web page. The products may include goods, services, or information. The information may be obtained by providing a template that elicits user-specified data, such as a web page.

      In accordance with another embodiment of the invention, the method may  
15 include obtaining a set of user or consumer ratings of the selection of products and descriptions, or obtaining other feedback relevant to the primary electronic site, customized electronic site or products, and analyzing the set of ratings and/or feedback to enable a primary electronic site, or a customized electronic site, to automatically suggest products that confirm to a user's or consumer's  
20 preferences. The analysis may be performed a preference analysis methodology such as a collaborative filtering process.

      In accordance with yet another embodiment of the invention the customized electronic site pertains to customized goods and the criteria includes customization data pertinent to customizing the goods. The customization data  
25 may include a logo and the logo may be transmitted to a primary electronic site via electronic upload, electronic download, facsimile, e-mail, or any other relevant mode of transmission.

      In accordance with another embodiment of the invention, an apparatus for providing a customized electronic site includes a primary electronic site and at  
30 least one dedicated server for serving the primary electronic site. The primary

electronic site has a root directory for collecting information pertinent to the customized electronic site. The primary electronic site may also include a selection engine, which may include a computer program product. The apparatus also includes a primary database in communication with the dedicated server,  
5 and the database includes images and descriptions of products offered by the primary electronic site and by the customized electronic site.

In accordance with another embodiment of the invention, the apparatus may include at least one secondary data base in communication with the at least one dedicated server, the secondary data base including images and descriptions  
10 of goods offered by the primary electronic site and by the customized electronic site. Both the primary database and the secondary databases may also include descriptions of services offered by the customized electronic site. The input and output of electronic data may be via wired or wireless connections.

#### 15 Brief Description of the Drawings

The foregoing features of the invention will be more readily understood by reference to the following detailed description, taken with reference to the accompanying drawings, in which:

Fig. 1 is a flow chart illustrating a method for establishing a customized  
20 electronic site for the purpose of providing products in accordance with one embodiment of the present invention;

Figs. 2(a)-(b) are a flow-chart illustrating a detailed method for establishing a customized electronic site in accordance with another embodiment of the present invention;

25 Fig. 3 is a flow chart illustrating a method for establishing a customized electronic site in accordance with a further embodiment of the present invention;

Fig. 4 is a flow chart illustrating a method of establishing a customized electronic site according to another embodiment of the present invention;

Fig. 5 is a block diagram illustrating an apparatus for establishing a  
30 customized electronic site in accordance with another embodiment of the present

invention;

Fig. 6 illustrates a primary electronic site in accordance with an embodiment of the present invention;

Fig. 7 illustrates a web page providing an action interface in accordance  
5 with the embodiment of Fig. 6;

Figs. 8(a)–(d) illustrate a web page providing user selection interfaces in accordance with the embodiment of Fig. 6;

Figs. 9(a)–(c) illustrate a web page providing a user confirmation interface in accordance with the embodiment of Fig. 6;

10 Fig. 10 illustrates a web page providing a user information interface in accordance with the embodiment of Fig. 6;

Fig. 11 illustrates a web page providing a user payment interface in accordance with the embodiment of Fig. 6;

15 Fig. 12 illustrates a web home page of a customized electronic site in accordance with the embodiment of Fig. 6;

Fig. 13 illustrates a web page providing an invoice interface in accordance with the embodiment of Fig. 6;

Fig. 14 illustrates a web page providing a consumer option interface in accordance with the embodiment of Fig. 6;

20 Figs. 15(a)–(b) illustrate web pages providing consumer selection interfaces in accordance with the embodiment of Fig. 6;

Fig. 16 illustrates a web page providing a consumer search interface in accordance with the embodiment of Fig. 6;

25 Fig. 17 illustrates a web page providing a consumer information interface in accordance with the embodiment of Fig. 6;

Fig. 18 illustrates a web page providing a consumer payment interface in accordance with the embodiment of Fig. 6;

Fig. 19 illustrates a web page providing a consumer invoice interface in accordance with the embodiment of Fig. 6;

30 Fig. 20 is a block diagram illustrating a system for creating customized

electronic sites in accordance with another embodiment of the present invention;  
and

Fig. 21 is a flow chart illustrating a method for creating a customized  
electronic site in accordance with a further embodiment of the present invention.

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#### Detailed Description of Specific Embodiments

*Definitions.* As used in this description and the accompanying claims, the  
following terms shall have the meaning indicated, unless the context otherwise  
requires:

10       An "electronic site" is an arrangement including a server, accessible over a  
network by a population of potential consumers, pursuant to which a member of  
the population may enter into a transaction **involving products offered by the  
electronic site. Thus, an electronic site includes a web site that offers products  
but not a web site that merely offers links to other existing web sites.**

15       A "primary electronic site" refers to electronic site technology that hosts  
establishment of secondary electronic sites in accordance with systems and  
methods disclosed herein.

      A "user" is a person, corporation, or other entity that uses the primary  
electronic site to create a secondary electronic site.

20       A "consumer" is a person, corporation, or other entity that purchases or  
retrieves products from the secondary electronic site.

      A "product" is any good, service, or information that a user or primary  
electronic site wishes to provide to a user or consumer.

25       A "selection engine" is an interface that electronically drives the selection,  
purchase, transaction, and invoice processes.

      Fig. 1 is a flow chart illustrating a method for establishing a customized  
electronic site for the purpose of providing products in accordance with one  
embodiment of the present invention. In process 101 information specifying  
criteria for a customized electronic site is obtained. The criteria include a selection

of products and descriptions that will be offered by a user to a consumer. This is accomplished through a network such as the Internet including, for example, the World Wide Web. The information may be obtained by a primary electronic site, or other electronic device, through the Internet, or it may be obtained through e-mail or facsimile, or other methods of transmittal. The primary electronic site may provide a template that elicits user-specified data. An example of such a template would be a web page.

The criteria may include a selection of goods descriptions or a selection of pre-specified goods descriptions. For example, the user may provide the primary electronic site with its own selection of goods descriptions, or the user may select a selection offered by the primary electronic site. Similarly, the criteria may be a selection of services descriptions that may be described by the user or selected from services described by primary electronic site. The criteria may also relate to information, such as legal cases, articles, books, etc. In process 102, the primary electronic site, or other electronic device, uses the information to automatically establish a customized electronic site.

The customized electronic site may be a web page representing a storefront, office, library, etc. Further, the customized electronic site may be part of the primary electronic site, and thereby accessed through the primary electronic site, or it may be separate.

If the products offered to the consumer are goods, they may be customized through the primary electronic site. For example, the goods may be customized with the user's logo or name. A logo may be transmitted to the primary electronic site by way of electronic upload or download. It would also be within the scope of the invention to transmit a user's logo to the primary electronic site through an e-mail message, facsimile, or any other relevant form of transmission. The primary electronic site may provide a selection of goods and effect delivery of the goods to a user or consumer in bulk or individually. The primary electronic site may also provide a selection of services and effect the performance of the service

for the user or consumer. The primary electronic site may also inventory the products of the customized electronic site for the user.

In further embodiments of the invention, the criteria may include a selection of pre-specified marketing materials, such as advertisements for the products offered to the consumer by the user, that is transmitted across the network. The criteria may also include a selection of links that are transmitted across the network. The links may include data ports or may lead directly to information pertinent to the products. The criteria may also include a selection of linkages between the primary electronic site and the customized electronic site or a between the customized electronic site and resources pertinent to the customized electronic site.

Figs. 2(a)-(b) are a flow-chart illustrating a method for establishing a customized electronic site in accordance with another embodiment of the present invention. As is shown in Fig. 2(a), a user selects a main category of products from the primary electronic site in process 201. Such main categories may be designated in the manner of different types of stores, departments in a store, aisles in a grocery store, insurance types, courts, etc. For example, main categories for users who provides insurance to consumers might be LIFE INSURANCE, FIRE INSURANCE, AUTO INSURANCE, HEALTH INSURANCE, and ANNUITIES. Main categories for users who provide employees in a company articles containing the company's logo might be OFFICE SUPPLIES, CLOTHING, GLASSWARE, etc. In process 202 the user then selects a sub category. For the previous examples, sub categories of FIRE INSURANCE might be HOME, APARTMENT, or BUSINESS and sub categories of OFFICE SUPPLIES might be STAPLERS, DESK MATS, CALCULATORS, PENS, PENCILS, and so on.

The user then selects a specific item in process 203 and a specific characteristic for that item, such as color or borders if applicable, in process 204. The user submits the item as a product of the user's customized electronic site in process 205. At this point, the user may decide to select more products or not. To

select more products, the user simply repeats processes 201-205; otherwise the user continues on to process 206 to review the selections made. At this point, the user may delete products, change characteristics, change the quantity of products ordered, or add more products. After the user has reviewed the selections, the  
5 order is submitted to the primary electronic site in process 207.

In process 208, the user provides the primary electronic site with shipping and billing information such as the user's address, phone number, facsimile number, e-mail address, check number, account number, or credit card number. The user then reviews the order again in process 209 and confirms the payment  
10 information.

In process 210, shown in Fig. 2(b), the user selects colors for the customized electronic site and provides a name for the customized electronic site. The user is then able to preview the colors and format selected in process 211. If the color and/or format must be adjusted, the user can do so in process 212. When the  
15 color and format preferences are satisfactory, the user submits the selections to the primary electronic site in process 213. The user may then enter the customized electronic site in process 214. At any time after this customized electronic site is created, the user may re-enter the primary electronic site to add, delete, or modify colors, products, etc.

Fig. 3 is a flow chart illustrating a method for establishing a customized electronic site in accordance with a further embodiment of the present invention. In this embodiment, information specifying criteria for a customized electronic site is obtained by a primary electronic site that includes a selection engine in process 301. A data base containing the specified criteria is automatically  
20 established in process 302. This may be accomplished by reading data from temporary or pre-existing electronic files or databases and writing the data into a new database using the selection engine. The selection engine may be replicated for use by the customized electronic site or the customized electronic may be enabled to use the selection engine of the primary electronic site without  
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replication. Similarly, a new selection engine may be created for the customized electronic site. The selection engine may comprise a computer program product. It should be noted that such a computer program product might be created with HTML code, JAVA, or C++ but is not limited to any particular language. Further,  
5 one skilled in the art will recognize that such a computer program product may provide any number of new databases, and that these new databases may be in communication with the primary electronic site as well as the customized electronic site. Thus additional databases are established as needed or desired in process 303. A customized electronic site is established in process 304.

10 Fig. 4 is a flow chart illustrating a method of establishing a customized electronic site according to another embodiment of the present invention. In this embodiment, information specifying criteria for a customized electronic site is again obtained through, for example, a primary electronic site in process 401. The information is used to establish a customized electronic site in process 402. Once  
15 the customized electronic site has been established, user or consumer ratings or feedback concerning the customized or primary electronic site is obtained in process 403. The feedback or ratings may be obtained through the primary electronic site, through the customized electronic site, through an e-mail message, e-mail attachment, and/or HTML link, or otherwise digitally or electronically  
20 transmitted. A ratings questionnaire may be sent to the users or consumers to elicit the recipient's degree of preference for the products offered by the primary or customized electronic site. The feedback or ratings are analyzed in process 404.

The analysis may be accomplished using a collaborative filtering technique. Collaborative filtering techniques are disclosed in U.S. Patent No. 6,064,980  
25 issued to Jacobi et al. and U.S. Patent 6,041,311 issued to Chislenko et al., the disclosures of which are herein incorporated by reference. In one embodiment, a preference vector is maintained for each product recipient (user or consumer), containing as elements the recipient's numerical rating of the product. For each given product recipient who has already rated products, a host system, such as

the server 502 of Fig. 5, identifies groups of recipients who have the highest correlation of preference vectors with that of the given recipient, and who thus have similar tastes in products. This may be performed, for example, by evaluating the dot product of preference vectors or recipients and selecting a group of recipients having the highest results. Then, for each product that the given recipient has not yet received, the system determines how highly it was rated by the selected group of recipients. Those products that received high ratings by the selected group (for example, products that received above a specified average numerical rating, or that received ratings which are relatively high when compared with those of other products that the given recipient has not received) are then suggested to the recipient (user or consumer) in process 405. Thus, products are suggested to recipients in a way that accords with the preferences of other recipients having similar tastes. In this way, the likelihood that a user or consumer enjoys the full value of the customized electronic site is increased.

Fig. 5 is a block diagram illustrating an apparatus for establishing a customized electronic site in accordance with another embodiment of the present invention. The apparatus includes a primary electronic site 501. The primary electronic site includes a root directory 503 for collecting information pertinent to the customized electronic site. The primary electronic site may be a host computer, additional server, web page, or other electronic or digital device. The apparatus further includes at least one dedicated server 502 for serving the primary electronic site 501 and the customized electronic site 504.

A primary data base 505 is in communication with the at least one dedicated server 502, but as noted above, additional data bases, such as 506 may be established and added as needed or desired. The database 505 includes images and descriptions of products offered by the primary electronic site 501 and by the customized electronic site 504. The data base may also include format information for the customized electronic site 504, user and/or consumer product

preferences, billing and delivery information, and so on. Input and output of electronic data to and from the apparatus or between the component of the apparatus may be wireless. Similarly, communication may be hardwired such as through a telephone, modem, cable, or any other viable method.

5        Fig. 6 illustrates a primary electronic site in accordance with an embodiment of the present invention. In this embodiment, the primary electronic site 600 is a web site, but the primary site may be any device that is accessed electronically or digitally. In this embodiment, the primary electronic site 600 includes a plurality of links 601-608. When a user accesses link 603, the user will  
10    be led through a series of processes which begin at a user action interface 700 as shown in Fig. 7. Here, the user chooses link 701 to select the products that will be offered in a customized electronic site.

      Figs. 8(a)–(d) illustrate user selection interfaces 800 in accordance with the embodiment of Fig. 6. The user starts by selecting from a plurality pre-specified  
15    categories 801-805 as shown in Fig. 8(a). For example, the user may choose category 801 to begin purchasing products geared toward men. The user may then select from a plurality of sub-categories 806-809. In this example, the user selects sub-category 806. As illustrated in Fig. 8(b) the user may then select from variety of items 810-815, such as the “Mock Turtleneck” 812. The selected item  
20    812 is displayed in Fig. 8(c) and the user may then choose the characteristic and color by using links 816. For example, the user may choose link 817 to select the color “Ash” and link 818 to have a logo or name embroidered on the item. After the item has been selected, the interface 800 displays a message 819, as shown in  
25    Fig. 8(d), to indicate that an item has been added for the user’s customized electronic site. In this example the customized site will be an electronic store for selling, among other things, at least one “Mock Turtleneck” man’s shirt.

      Figs. 9(a)-(c) illustrate a user confirmation interface in accordance with the embodiment of Fig. 6. Through the user confirmation interface 900 a user may review the selections the user has made for use in the user’s customized electronic

site. Display 901 shows the item number and quantity of that item number previously selected. The user may go to a product chart 902 to see the products displayed according to item number. The user may use links 903 and 904 to purchase an item for the customized site or remove any particular item before submitting an order for the customized site. When purchasing items through link 903, selections the user has made are shown through a display 909. Fields 905-908 are provided so that the user may indicate the desired quantity and size of each item.

Fig. 10 illustrates a user information interface in accordance with the embodiment of Fig. 6. The user information interface 1000 includes a field 1001 for entering a company name and a field 1002 for entering the name of an individual user. Additional fields 1003-1008 are provided for the user's shipping address, city, state, country, and zip code. The user enters a telephone number in field 1009 and an e-mail address in field 1010. There is also a field 1011 wherein a user may enter comments and suggestions. The user may check a field 1012 to indicate that the billing and shipping addresses are the same.

Fig. 11 illustrates a user payment interface in accordance with the embodiment of Fig. 6. The user payment interface includes a chart 1101 which displays the product number 1102, the product name 1103, the quantity 1104, the price of the individual product 1104, and the total price for the number of products selected 1106. The chart 1101 also displays the subtotal 1107, the tax 1108, the cost of shipping and handling 1109, and the grand total for the entire order 1110. The user payment interface 1100 further includes fields for entering a credit card type 1111, a credit card number 1112, and an expiration date 1113. The user submits this information to the primary electronic site 600.

Fig. 12 illustrates a customized electronic site in accordance with the embodiment of Fig. 6. Through a series of processes as described with respect to Fig. 2(b), a customized electronic site 1200 is established. In this embodiment the colors, name, and format of the customized electronic site 1200 are submitted by

the user to the primary electronic site via a series of interfaces and selections similar to those described with respect to Figs. 6-11. In this embodiment, the customized electronic site includes a field **1201** for displaying the site name and a field **1202** for displaying products offered at the site. A third field **1203** displays the main categories under which the products fall and enables a consumer to search through the main categories.

Fig. 13 illustrates an invoice interface in accordance with the embodiment of Fig. 6. The invoice interface **1300** displays a shipping time period **1301** for the order as well as other comments from the primary electronic site to the user **1302** that may be pertinent to the order. The user invoice interface also displays an order number **1303** and order information **1304**. A chart **1305** displaying all the information described above with respect to the user payment interface chart **1101** is also included. A link **1306** enables a user to enter the new store or other customized electronic site.

Fig. 14 illustrates a consumer option interface in accordance with the embodiment of Fig. 6. The consumer option interface **1400** includes a display **1402** that shows a consumer what is offered in the customized electronic site. A picture of the items, such as **1408** and **1409** is displayed with the item's name **1410** and price **1411**. Links **1403-1407** enable the consumer to view products that fall under the link name category. There is also a link **1401** that enables a consumer to search the customized electronic site.

Figs. 15(a)-(b) illustrate consumer selection interfaces in accordance with the embodiment of Fig. 6. The consumer selection interface **1500** displays the selected item **1408** for the consumer, as well as a description of the item **1501** and the price of the item **1502**. The consumer may then choose to have a name or logo embroidered on the item through field **1503** shown in Fig. 15(a) or screen-printed on the item **1504** as shown in Fig. 15(b). The consumer may enter the quantity of the product he or she wishes to purchase in field **1507** and select a color through field **1506**.

Fig. 16 illustrates a consumer search interface in accordance with the embodiment of Fig. 6. The consumer search interface **1600** includes a search result display **1601** that allows the consumer to view the products in specific categories or with specific characteristics. The item numbers, quantities, and a subtotal for the products that the consumer has selected for delivery may also be viewed in display **1602**. When the consumer has finished shopping and selecting, and is ready to purchase the products, he or she may do so through link **1603**.

Fig. 17 illustrates a consumer information interface in accordance with the embodiment of Fig. 6. The consumer information interface **1700** includes display **1701** that shows the item number and quantity of each product the consumer has selected, as well as a subtotal indicating what the consumer has spent. The interface **1700** also includes a chart **1702** for displaying the item number, quantity, price of each item, and total price for the quantity selected. The chart **1702** also provides a link **1704** that enables a consumer to remove an item before he or she submits payment. The interface **1700** further includes fields **1703** similar to those described with respect to the user information interface of Fig. 10.

Fig. 18 illustrates a consumer payment interface in accordance with the embodiment of Fig. 6. The consumer payment interface **1800** displays a chart **1801** that allows a consumer to view all of the information contained in the chart **1101** described above with respect to the user payment interface **1100**. Fields **1802** enable a consumer to enter payment information, such as a credit card number. It should be noted, however, that other methods of payment may be provided through the payment interfaces **1100** and **1800**, such as providing a field for a check number, bank account number, and/or pin number.

Fig. 19 illustrates a consumer invoice interface in accordance with the embodiment of Fig. 6. The consumer invoice interface **1900**, like the user invoice interface **1300** displays a shipping time period **1901** for the order as well as other comments **1902** from the primary electronic site or the customized electronic site to the consumer that may be pertinent to the order. The name **1906** of the

customized electronic site is also displayed on this invoice. The consumer invoice interface 1900 also displays an order number 1903 and shipping and billing information 1904. A chart 1905 displaying all the information described above with respect to the consumer payment interface chart 1801 is also included.

5           **Fig. 20 is a block diagram illustrating a system for creating customized electronic sites in accordance with another embodiment of the present invention.** A primary electronic site 2000 is in communication with a plurality of primary data bases 2001, 2002, and 2003. Primary data base 2001 is a products data base that contains descriptions and other information specific to individual  
10 products that may be offered by the primary electronic site 2000. Primary data base 2002 is a data base that contains data related to general characteristics that are not specific to any particular product. This data base 2002 may contain data related to colors, sizes, prices, formats, etc. Primary data base 2003 is in direct communication with products data base 2001 and contains images of the products  
15 as well as product coding information. The primary electronic site 2000 obtains the products, characteristics, and images for a customized electronic sites 2010, 2020 and 2030 from primary data bases 2001, 2002, and 2003 in accordance with user selections.

The primary electronic site 2000 stores data obtained from the primary data  
20 bases 2001, 2002, and 2003 in a temporary storage facilities 2004 (for customized electronic site 2010), 2006 (for customized electronic site 2020), and 2008 for customized electronic site 2030). Temporary storage can be achieved through the use of a filtering program such as CGI shopping filter 2005. Customized electronic sites 2010, 2020, and 2030 are each in communication with the primary  
25 electronic site 2000 and may also be in communication with primary data base 2003. Secondary data bases 2011 and 2012 are in communication with the customized site 2010, secondary data bases 2021 and 2022 are in communication with customized electronic site 2020, and secondary data bases 2031 and 2032 are

in communication with customized electronic site 2030. Secondary data bases 2011, 2021 and 2031 contain product descriptions and other information specific to the products offered at their associated customized electronic site 2010 and 2020 respectively. Secondary data bases 2012, 2022 and 2032 contain data related to general characteristics of the products offered by their associated customized electronic site. Although three customized electronic sites 2010, 2020 and 2030 are shown, it should be noted that the primary electronic site 2000 is in communication with all the customized electronic sites it creates, and there is no limit to the possible number of customized electronic sites that can be created.

Fig. 21 is a flow chart illustrating a method for creating a customized electronic site in accordance with a further embodiment of the present invention. In process 2101 product data is accumulated in a temporary storage facility. The temporary storage facility may be a buffer in a computer system. The buffer can be flushed out after the order is complete. A user will make a decision 2102 as to whether inventory for the customized site is complete. If the inventory is not complete, process 2101 will be repeated. If the inventory is complete, products intended for purchase from the customized site are accumulated in process 2103. A decision 2104 is made as to whether the purchase order is complete. If the purchase order is not complete, process 2103 is repeated. If the purchase order is complete, payment is processed in process 2104. Preferences for the customized site are derived in process 2106. These preferences include characteristics of the customized site itself such as borders, colors, site name, etc. A customized site is created in process 2107 in accordance with the preferences that were derived in process 2106. Data bases specific to the customized site are filled with inventory data in process 2108.

It should be understood that various changes and modifications to the preferred embodiments described above might also be apparent to those skilled in the art. Modifications can be made without departing from the spirit and scope of the invention and without diminishing its attendant advantages. It is therefore



intended that such changes and modifications be covered by the following claims.

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